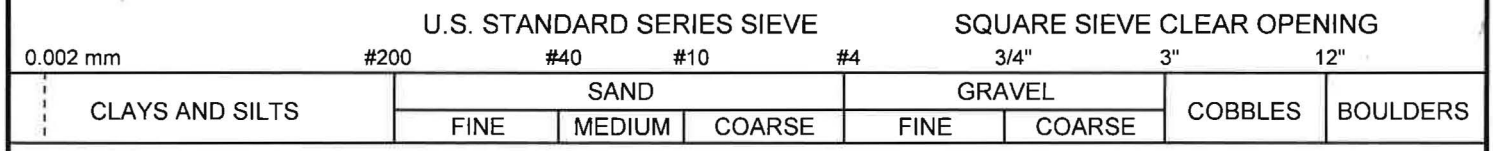
PRIMARY DIVISIONS			GROUP	SECONDARY DIVISIONS
COURSE GRAINED SOILS (MORE THAN HALF OF MATERIAL IS LARGER THAN 200 SIEVE)	GRAVELS (MORE THAN HALF OF COARSE FRACTION IS LARGER THAN #4 SIEVE)	CLEAN GRAVELS (LESS THAN 5% FINES)	GW	Well graded gravels, gravel-sand mixtures, little or no fines.
			GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.
		GRAVEL WITH FINES	GM	Silty gravels or gravel-sand mixtures, non-plastic fines.
			GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines
	SANDS (MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN #4 SIEVE)	CLEAN SANDS (LESS THAN 5% FINES)	SW	Well graded sands, gravelly sands, little or no fines.
			SP	Poorly graded sands or gravelly sands, little or no fines.
		SANDS WITH FINES	SM	Silty sands, sand-silt mixtures, non-plastic fines.
			SC	Clayey-sands, sand-clay mixtures, plastic fines.
FINE GRAINED SOILS (MORE THAN HALF OF MATERIAL IS SMALLER THAN #200 SIEVE)	SILTS AND CLAYS (LIQUID LIMIT IS LESS THAN 50%)		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, clayey silts with slight plasticity.
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL	Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS (LIQUID LIMIT IS GREATER THAN 50%)		MH	Organic silts, micaceous or diatomaceous fine sandy or silty soils,
			CH	Inorganic clays of high plasticity, fat clays.
			OH	Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS			Pt	Peat and other highly organic soils.

DEFINITION OF TERMS



GRAIN SIZES

SANDS AND GRAVELS	BLOWS / FOOT [1]
VERY LOOSE	0 - 4
LOOSE	4 - 10
MEDIUM DENSE	10 - 30
DENSE	30 - 50
VERY DENSE	OVER 50

RELATIVE DENSITY

SILTS AND CLAYS	STRENGTH [2]	BLOWS / FOOT [1]
VERY SOFT	0 - 1/4	0 - 2
SOFT	1/4 - 1/2	2 - 4
FIRM	1/2 - 1	4 - 8
STIFF	1 - 2	8 - 16
VERY STIFF	2 - 4	16 - 32
HARD	OVER 4	OVER 32

FIRMNESS

[1] Number of blows (N) of 140 pound hammer falling 30 inches to drive a 2 inch O.D. (1-3/8 inch I.D.) split spoon sampler (ASTM D-1586); Standard Penetration Test (SPT) unless noted otherwise

[2] Unconfined compressive strength in tons/square foot as determined by laboratory testing or approximated by the Standard Penetration Test (ASTM D-1586), Pocket Penetrometer, Torvane, or visual observation.

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KEY TO EXPLORATORY BORING LOGS
Unified Soil Classification System (ASTM D-2487)

Slope Failure Rmédiation
240 Highland Avenue
San Rafael, CA 94901

DATE	PROJECT	FIGURE:
April 2020	**22007**	**B**